

CLAIMS

1. An information recording medium comprising:
a recording area to record therein record information by irradiating
5 laser light thereto; and
a recording control area to record therein control information for
controlling a laser power in accordance with a recording position in said
recording area.
- 10 2. The information recording medium according to claim 1, wherein the
control information indicates an association between information which
represents the recording position in said recording area and information
which represents recording sensitivity in the recording position.
- 15 3. The information recording medium according to claim 1, wherein the
control information indicates an association between information which
represents the recording position in said recording area and information
which represents an optimum laser power in the recording position.
- 20 4. The information recording medium according to claim 1, wherein the
control information indicates a correlation relationship between the recording
position in said recording area and an optimum laser power in the recording
position.
- 25 5. An information recording apparatus comprising:
a recording device for recording record information by irradiating

laser light onto said information recording medium according to claim 1; and
an optimizing device for optimizing a laser power, on the basis of the
control information recorded in said recording control area of said information
recording medium.

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6. The information recording apparatus according to claim 5, wherein
said optimizing device roughly estimates the control information at a
recording position for which the corresponding control information does not
exist, on the basis of the control information recorded in said recording
10 control area.

7. An information recording apparatus comprising:
a first recording device for irradiating laser light onto an information
recording medium and for recording record information onto said information
15 recording medium;

a control information generating device for obtaining an optimum
laser power according to a recording position of said information recording
medium and for generating control information which indicates an
association between information which represents the recording position and
20 information which represents the optimum laser power;

a second recording device for recording the control information
generated by said control information generating device; and

a controlling device for controlling a laser power of the laser light
irradiated onto said information recording medium, on the basis of the control
25 information recorded by said second recording device.

8. The information recording apparatus according to claim 7, wherein said second recording device records the control information generated by said control information generating device, onto said information recording medium.

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9. The information recording apparatus according to claim 7, wherein said control information generating device generates the control information, on the basis of a calibration value of a laser power obtained by performing running OPC (Optimum Recording Calibration).

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10. The information recording apparatus according to claim 7, wherein said control information generating device generates the control information corresponding to each predetermined area of said information recording medium.

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11. The information recording apparatus according to claim 7, wherein said control information generating device generates the control information corresponding to a recording linear velocity of said information recording medium.

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12. The information recording apparatus according to claim 7, wherein said information recording medium comprises a plurality of recording layers, and

said controlling device controls the laser power irradiated to another recording layer, on the basis of the control information obtained in one recording layer, in a case in which a target, to which said recording device

performs recording operation, is changed from the one recording layer to the another recording layer out of the plurality of recording layers.

13. The information recording apparatus according to claim 7, wherein

5 said information recording medium comprises a plurality of recording layers, and

said control information generating device generates the control information in another recording layer, on the basis of the control information obtained in one recording layer, in a case in which a target, to which said
10 recording device performs recording operation, is changed from the one recording layer to the another recording layer out of the plurality of recording layers.

14. An information recording method comprising:

15 a recording process of recording record information by irradiating laser light onto said information recording medium according to claim 1; and
an optimizing process of optimizing a laser power, on the basis of the control information recorded in said recording control area of said information recording medium.

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15. An information recording method comprising:

a first recording process of irradiating laser light onto an information recording medium and of recording record information onto said information recording medium;

25 a control information generating process of obtaining an optimum laser power according to a recording position of said information recording

medium and of generating control information which indicates an association between information which represents the recording position and information which represents the optimum laser power;

a second recording process of recording the control information generated in said control information generating process; and

a controlling process of controlling a laser power of the laser light irradiated onto said information recording medium, on the basis of the control information recorded in said second recording process.

10 16. An information recording / reproducing apparatus comprising:
said information recording apparatus according to claim 5; and
a reproducing device for reproducing the record information recorded on said information recording medium.

15 17. An information recording / reproducing apparatus comprising:
said information recording apparatus according to claim 7; and
a reproducing device for reproducing the record information recorded on said information recording medium.

20 18. An information recording / reproducing method comprising:
said information recording method according to claim 14; and
a reproducing process of reproducing the record information recorded on said information recording medium.

25 19. An information recording / reproducing method comprising:
said information recording method according to claim 15; and

a reproducing process of reproducing the record information recorded on said information recording medium.

20. A computer program for record control to control a computer provided
5 for the information recording apparatus according to claim 5, to make the computer function as at least one portion of said recording device and said optimizing device.

21. A computer program for record control to control a computer provided
10 for the information recording apparatus according to claim 7, said computer program making the computer function as at least one portion of said recording device, said control information generating device, said second recording device, and said controlling device.

15 22. A computer program for record / reproducing control to control a computer provided for the information recording /reproducing apparatus according to claim 18, said computer program making the computer function as at least one portion of said information recording apparatus and said reproducing device.

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23. A computer program for record / reproducing control to control a computer provided for the information recording /reproducing apparatus according to claim 19, said computer program making the computer function as at least one portion of said information recording apparatus and said
25 reproducing device.